

## 7. RESEARCH AND DEVELOPMENT EXPENDITURES

The Administration is proposing \$71 billion in research and development (R&D) investments in 1997. Civilian R&D will increase over \$1 billion or three percent to \$34 billion. Civilian R&D will increase nearly 16 percent since 1993. In 1997, university-based re-

search will increase to roughly \$12 billion, a \$257 million increase over 1996. Chapter 10 of the *Budget of the United States Government—Supplement* includes a discussion of science and technology that contains more information on R&D activities.

**Table 7-1. RESEARCH AND DEVELOPMENT (R&D) EXPENDITURES**

(Outlays, dollar amounts in millions)

|   | Actual |        | 1996<br>Estimate | 1997<br>Proposed | Dollar<br>Change<br>1996 to<br>1997 | Percent<br>Change<br>1996 to<br>1997 |
|---|--------|--------|------------------|------------------|-------------------------------------|--------------------------------------|
|   | 1993   | 1995   |                  |                  |                                     |                                      |
| <b>By agency:</b>                                   |        |        |                  |                  |                                     |                                      |
| Defense .....                                       | 38,035 | 35,613 | 35,269           | 34,922           | -347                                | -1%                                  |
| Health and Human Services .....                     | 9,660  | 11,111 | 11,145           | 12,132           | 987                                 | +9%                                  |
| National Aeronautics and Space Administration ..... | 8,885  | 9,399  | 9,643            | 9,218            | -425                                | -4%                                  |
| Energy .....  | 6,945  | 6,943  | 7,128            | 6,943            | -185                                | -3%                                  |
| National Science Foundation .....                   | 1,842  | 1,999  | 2,309            | 2,501            | 192                                 | +8%                                  |
| Agriculture .....                                   | 1,455  | 1,498  | 1,532            | 1,510            | -22                                 | -1%                                  |
| Commerce .....                                      | 607    | 740    | 823              | 926              | 103                                 | +13%                                 |
| Interior .....                                      | 636    | 658    | 653              | 605              | -48                                 | -7%                                  |
| Environmental Protection Agency .....               | 519    | 495    | 425              | 523              | 98                                  | +23%                                 |
| Other .....   | 1,736  | 1,947  | 1,722            | 2,020            | 298                                 | +7%                                  |
| Total .....   | 70,320 | 70,403 | 70,649           | 71,300           | 654                                 | +1%                                  |
| <b>By R&amp;D theme:</b>                            |        |        |                  |                  |                                     |                                      |
| Basic research .....                                | 12,625 | 13,298 | 13,579           | 13,980           | 401                                 | +3%                                  |
| Applied research .....                              | 12,437 | 13,680 | 13,978           | 14,532           | 554                                 | +4%                                  |
| Development .....                                   | 42,625 | 41,461 | 40,830           | 40,435           | -395                                | -1%                                  |
| Equipment .....                                     |        | 475    | 781              | 758              | -23                                 | -3%                                  |
| Facilities .....                                    | 2,633  | 1,489  | 1,481            | 1,595            | 114                                 | +8%                                  |
| Total .....   | 70,320 | 70,403 | 70,649           | 71,300           | 651                                 | +1%                                  |
| <b>By civilian theme:</b>                           |        |        |                  |                  |                                     |                                      |
| Basic research .....                                | 11,370 | 12,172 | 12,405           | 12,754           | 349                                 | +3%                                  |
| Applied research .....                              | 8,511  | 9,890  | 10,170           | 10,597           | 427                                 | +4%                                  |
| Development .....                                   | 7,374  | 8,564  | 8,165            | 8,403            | 238                                 | +3%                                  |
| Equipment .....                                     |        | 317    | 634              | 608              | -26                                 | -4%                                  |
| Facilities .....                                    | 1,749  | 1,233  | 1,218            | 1,264            | 46                                  | +4%                                  |
| Subtotal .....                                      | 29,004 | 32,176 | 32,592           | 33,626           | 1,634                               | +3%                                  |
| <b>By defense theme:</b>                            |        |        |                  |                  |                                     |                                      |
| Basic research .....                                | 1,255  | 1,126  | 1,174            | 1,226            | 52                                  | +4%                                  |
| Applied research .....                              | 3,926  | 3,790  | 3,808            | 3,935            | 127                                 | +3%                                  |
| Development .....                                   | 35,250 | 32,897 | 32,665           | 32,032           | -633                                | -2%                                  |
| Equipment .....                                     |        | 158    | 147              | 150              | 3                                   | +2%                                  |
| Facilities .....                                    | 885    | 256    | 263              | 331              | 68                                  | +26%                                 |
| Subtotal .....                                      | 41,316 | 38,227 | 38,057           | 37,674           | -383                                | -1%                                  |
| R&D support to university researchers .....         | 11,674 | 11,373 | 12,130           | 12,387           | 257                                 | +2%                                  |